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UNITED STATES DISTRICT COURT
DISTRICT OF OREGON

AUDUBON SOCIETY OF PORTLAND, WILDLIFE
CENTER OF THE NORTH COAST, ANIMAL LEGAL
DEFENSE FUND, CENTER FOR BIOLOGICAL
DIVERSITY, FRIENDS OF ANIMALS,

Plaintiffs,

v.

U.S. ARMY CORPS OF ENGINEERS, U.S. FISH AND
WILDLIFE SERVICE, USDA WILDLIFE SERVICES,

Defendants.

Civil No. 15-665

COMPLAINT FOR
DECLARATORY
AND INJUNCTIVE
RELIEF

INTRODUCTION

1. More than two decades ago, a federal district court criticized federal agencies' efforts to restore salmon and steelhead populations in the Columbia River Basin, observing that federal dam operators had completed only "relatively small steps, minor improvements and adjustments—when the situation literally cries out for a major overhaul." *Idaho Dep't of Fish & Game v. Nat'l Marine Fisheries Serv.*, 850 F. Supp. 886, 900 (D. Or. 1994). Sadly, over the past

20 years federal dam operators have looked virtually everywhere but in the mirror in their search for culprits to blame for the decline of Columbia Basin salmon and steelhead. Without even considering an overhaul of dam operations to improve salmon survival, the U.S. Army Corps of Engineers (“Corps”) has instead decided to kill thousands of native birds that have coexisted with salmon for millennia. The Corps plans to shoot 10,912 adult double-crested cormorants on and around East Sand Island in the Columbia River estuary, and will destroy an additional 26,096 cormorant nests either by oiling eggs or allowing eggs to fail and nestlings to starve after their parents have been shot. This mass killing will result in the destruction of 15% of the entire population of double-crested cormorants west of the Rocky Mountains – a population already reduced to less than 10% of its original size. Moreover, in a decision almost unprecedented by modern wildlife management standards, federal agencies plan to intentionally drive cormorant populations below levels defined by the Corps and U.S. Fish and Wildlife Service (“FWS”) as “sustainable.” And in the end, this wholesale slaughter of native birds will not advance salmon recovery; a high percentage of protected juvenile salmon and steelhead now consumed by cormorants will simply be eaten by other predators or otherwise die.

2. The Corps and FWS have not complied with important legal requirements in their drive to divert attention away from Columbia Basin dams by killing birds. The Corps completed an Environmental Impact Statement that focuses exclusively on controlling cormorants, but it has been nearly two decades since the agency has evaluated alternatives to status quo dam operations that could improve survival of juvenile salmon and steelhead far more than killing native birds. At the same time, the Corps has not received a permit covering the destruction of potentially thousands of cormorant eggs that will fail—as well as chicks that will starve in their nests—when a parent bird is shot. Finally, the Corps has authority to manage cormorants only

when the agency acts follows a management plan prepared by FWS—and no such plan exists. Both the Corps and FWS are breaking the law in multiple ways while intentionally putting the western population of double-crested cormorants in real peril.

OVERVIEW

3. Salmonids and double-crested cormorants (“cormorants”) have evolved together in the Columbia River watershed for thousands of years. It was not until European and American settlers arrived that both cormorants and salmon began declining drastically. Humans reduced cormorant populations and extirpated many colonies by killing cormorants, destroying their nests, and spraying dichlorodiphenyltrichloroethane (“DDT”) on crops, which in turn caused reproductive problems in cormorants. Similarly, recent human immigrants to the Pacific Northwest caused the decline of salmonid populations in various ways, first by harvesting unsustainably and later by building and operating dams, adversely modifying salmonid habitat, and polluting water bodies.

4. Beginning in the 1970s, cormorants began to make a comeback throughout the United States, due to the ban on DDT and protections under the Migratory Bird Treaty Act (“MBTA”). However, the population of cormorants in the western United States remains at least an order of magnitude below its historic level. Several cormorant colonies in the West continue to decline due to factors such as drought, habitat destruction, and persecution by humans.

5. Many runs of salmon and steelhead in the Columbia River basin have also declined substantially. Despite actions aimed at improving the status of these fish, such as regulating harvest, decreasing water pollution, improving spawning and rearing habitat, and implementing engineering solutions that attempt to decrease mortality at mainstem dams, operation of the Columbia River hydrosystem continues to play an enormous role in limiting

salmon survival. Thirteen Evolutionarily Significant Units (“ESUs”) are currently listed as either endangered or threatened under the Endangered Species Act (“ESA”).

6. The Corps and the Bureau of Reclamation (“Bureau”) own and operate the dams that together make up the Federal Columbia River Power System (“FCRPS”). Bonneville Power Administration (“BPA”) markets the energy produced by the FCRPS. Collectively, these agencies (“action agencies”) have a significant interest in operating dams in a way that maximizes revenue generation from power sales. This interest often conflicts with recovering listed salmonids because dam operations that optimize power generation generally reduce salmon survival.

7. Rather than considering FCRPS operation alternatives designed to increase salmon survival, the action agencies have attempted to identify non-hydro measures to achieve this goal to protect the status quo for dam operations. Such measures include physical modifications to the dams and restoration efforts in tributaries used by salmon and steelhead for spawning and rearing. While these actions contribute to salmon restoration efforts, many listed ESUs are unlikely to recover to non-listed and harvestable levels absent additional reforms in hydrosystem operations and changes to dam configuration to benefit specific ESUs. The action agencies built salmon conservation measures protective of the status quo for dam operations into a “reasonable and prudent alternative” (“RPA”) that they proposed to the National Marine Fisheries Service (“NMFS”) in 2007 as part of the ESA section 7 consultation process under the ESA. NMFS went along with the action agencies’ scheme by including the RPA drafted by these agencies into NMFS’s 2008, 2010, and 2014 biological opinions (“BiOps”) on FCRPS operations. All but one of NMFS’s FCRPS BiOps since 1993 have been declared illegal by

federal courts, and a challenge to the agency's 2014 BiOp is also currently pending before this Court.

8. In proposing operations to NMFS under the label of an RPA through ESA section 7 consultation, the action agencies have ignored their obligation under the National Environmental Policy Act ("NEPA") to consider an adequate range of dam operation alternatives, including alternatives that include modification to FCRPS operations designed to increase salmon survival. It has been two decades since the action agencies have done a comprehensive analysis of their FCRPS operation decisions under NEPA. The Corps similarly refused to evaluate such operational improvements among the alternatives to increase salmon survival considered in the agency's Final Environmental Impact Statement for its cormorant management plan ("cormorant EIS" or "FEIS"). As a result of failing to consider changes to dam operations that would increase survival of juvenile salmon and steelhead in the Columbia River estuary, the Corps has constructed a false narrative holding that it has no choice but to kill 11,000 cormorants and destroy over 26,000 nests on East Sand Island in the Columbia River estuary to protect salmon and steelhead. In fact, the "need" to take such drastic action is a construct of the Corps' own refusal to consider changes to dam operations that hold greater promise to improve salmon survival.

JURISDICTION AND VENUE

9. Jurisdiction is proper in this Court pursuant to 28 U.S.C. § 1331 (federal question), § 1346 (United States as a defendant), § 2201 (injunctive relief), and § 2202 (declaratory relief), § 2412 (costs and fees). The current cause of action arises under the laws of the United States, including the Administrative Procedure Act ("APA") and NEPA. An actual,

justiciable controversy exists between Plaintiffs and Defendant. The requested relief is proper under 28 U.S.C. §§ 2201–2202, and 5 U.S.C. §§ 705–706.

10. Venue is proper in this Court pursuant to 28 U.S.C. § 1391(e)(1) because Defendants Corps and FWS reside in this district. This case is also properly filed in the Portland Division of this Court because the challenged FEIS and MBTA take permit was issued by the Corps’ Portland District.

PARTIES

11. Plaintiff AUDUBON SOCIETY OF PORTLAND (“Audubon”) is a not-for-profit corporation located in Portland, Oregon. It “promotes the understanding, enjoyment, and protection of native birds, other wildlife, and their habitats,” focusing specifically on the Pacific Northwest. Audubon has over 400 volunteers and 15,000 individual members who reside in Oregon and Washington. Audubon members hike, camp, view birds (including cormorants) and other wildlife, fish, and enjoy the solitude and quiet of the areas surrounding East Sand Island and will be adversely impacted by the shooting of cormorants on and around the island, the cormorant carcasses floating in the Columbia River estuary, and the oiling of cormorant eggs on the island.

12. Plaintiff WILDLIFE CENTER OF THE NORTH COAST (“North Coast”) is a volunteer-based Oregon nonprofit corporation based in Astoria, Oregon. Its mission is “to rehabilitate injured, sick, orphaned and displaced native wildlife with the goal of releasing healthy, viable wildlife back into the appropriate habitat.” North Coast is the only wildlife care hospital on the Central and North Oregon coast. It provides professional medical care for all native birds and other wildlife and treats approximately 2,000 wildlife patients each year. North Coast receives no governmental funding and relies solely on private donations to fund its

rehabilitation activities. It has rehabilitated various wildlife species from the area of East Sand Island and plans to continue to do so in the future. The Corps' plan to shoot 11,000 cormorants will negatively affect North Coast's ability to get volunteers.

13. Plaintiff ANIMAL LEGAL DEFENSE FUND ("ALDF") is a nonprofit organization that fights to protect the lives and advance the interests of animals, using education, legal action, and advocacy to promote its mission for the benefit of the animals and the organization's members. ALDF brings this action on behalf of its members, many of whom are wildlife and bird enthusiasts who regularly enjoy and will continue to enjoy the recreational, educational, and aesthetic value inherent in viewing the double-crested cormorant population, as well as other birds, in the East Sand Island area. These birds consistently nest, forage, and spend time not only near East Sand Island, but also in areas like Astoria and farther up the Columbia River—all of the same places where ALDF's members go to view the cormorants in their natural habitat. ALDF's members' interests in observing, studying, and otherwise enjoying the double-crested and other cormorants in the East Sand Island area will be irreparably harmed by Defendants' killing and taking of migratory birds.

14. Plaintiff CENTER FOR BIOLOGICAL DIVERSITY ("CBD") is a 501(c)(3) nonprofit conservation organization with more than 825,000 members and online activists. CBD has an office in Portland, Oregon. CBD is dedicated to the protection of endangered species and wild places, and furthers its mission through science, law, and creative media, with a focus on protecting the lands, waters, and climate that species need to survive. Members of CBD enjoy watching birds and other wildlife in the Columbia River estuary, including in areas near East Sand Island. They will be adversely impacted by federal agency officials shooting cormorants on and around East Sand Island, cormorant carcasses floating in the Columbia River estuary, and

the oiling of cormorant eggs on East Sand Island. These deaths and the associated disturbance will distress the members and reduce their use of the area.

15. Friends of Animals (“Friends” or “FoA”) is a non-profit international advocacy organization incorporated in the state of New York since 1957, with over 200,000 members worldwide. Friends seeks to free animals from cruelty and exploitation around the world, and to promote a respectful view of non-human, free-living and domestic animals. Friends engages in a variety of advocacy programs in support of these goals. Friends is harmed by the Federal Defendant’s decision to authorize the killing of thousands of federally protected cormorants in the Pacific Northwest in significant ways. First, the decision debilitates Friends’ efforts to inform and educate about these issues, and prevents Friends and its members from having meaningful input into the Service’s decision to authorize this new wildlife-killing program. Second, many of Friends’ members regularly engage in cormorant viewing, and will continue to receive considerable pleasure and enjoyment from observing migratory birds and wildlife in their natural habitat.

16. Defendant UNITED STATES ARMY CORPS OF ENGINEERS (“Corps”) is a federal agency under the U.S. Department of Defense specializing in engineering, design, and construction management. The Corps manages numerous environmental projects, including dredging waterways and regulating wetlands, and has planed, and built hydropower dams throughout the United States. The Corps owns and operates many dams in the Columbia River Basin.

17. Defendant UNITED STATES FISH AND WILDLIFE SERVICE (“FWS”) is a federal agency within the U.S. Department of Interior. FWS is responsible for administering the MBTA, including issuing MBTA take permits.

18. Defendant Wildlife Services is an agency within the U.S. Department of Agriculture's Animal and Plant Health Inspection Service. Euphemistically named, Wildlife Services kills thousands of predators and other animals each year in the United States.

LEGAL BACKGROUND

National Environmental Policy Act

19. Congress enacted NEPA in 1969, directing all federal agencies to assess the environmental impacts of proposed actions that significantly affect the quality of the human environment. NEPA's public disclosure goals are twofold: (1) to insure that the agency has carefully and fully contemplated the environmental effects of its action; and (2) to insure that the public has sufficient information to review (and challenge if necessary) the agency's action.

20. The Council on Environmental Quality ("CEQ") promulgated uniform regulations to implement NEPA that are binding on all federal agencies. Those regulations are found at 40 C.F.R. Parts 1500–1508.

21. NEPA requires federal agencies to prepare an environmental impact statement ("EIS") for any "major federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C). An EIS is a "detailed statement" that must describe (1) the "environmental impact of the proposed action," (2) any "adverse environmental effects which cannot be avoided should the proposal be implemented," (3) reasonable alternatives to the proposed action, (4) "the relationship between local short term uses of man's environment and the maintenance and enhancement of long-term productivity," and (5) any "irreversible or irretrievable commitment of resources which would be involved in the proposed action should it be implemented." 42 U.S.C. § 4332.

22. NEPA seeks to “promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man.” 42 U.S.C. § 4321. To this end, NEPA’s implementing regulations require agencies to provide the decision maker and the public with adequate information, evidence, and analyses to fully assess the potential impacts of proposed actions. 40 C.F.R. § 1502.1. The scope of NEPA review is broad and includes describing the purpose and need for the project, disclosing and considering all reasonable alternatives, *Id.* § 1502.14(a), and direct, indirect and cumulative impacts on “ecological . . . , aesthetic, historical, cultural, economic, social, or health” interests. *Id.* § 1508.8. NEPA documentation must provide the decision maker and the public with adequate information, evidence, and analyses to fully assess the potential impacts of the proposed actions. *Id.* § 1502.1.

23. The requirement to evaluate all reasonable alternatives is not simply procedural; CEQ has stated that the alternatives analysis is “the heart” of the NEPA analysis. *Id.* § 1502.14; *see also* 42 U.S.C. § 4332(2)(E); 40 C.F.R. § 1507.2(d). The federal agency must “[r]igorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated;” “[d]evote substantial treatment to each alternative considered in detail including the proposed action;” and “[i]nclude reasonable alternatives not within the jurisdiction of the lead agency.” *Id.* § 1502.14(a)–(c).

24. To satisfy NEPA’s “hard look” requirement, a federal agency must present the environmental impacts of the proposed action and the alternative in comparative form, thus sharply defining the issues and providing a clear basis for choice among the options by the decision maker and the public. *Id.* § 1502.14. Because the purpose and need statement required by 40 C.F.R. § 1502.13 defines the scope of reasonable alternatives, an agency may not narrowly

construe the purpose and need so as to define away competing reasonable alternatives and foreclose consideration of a reasonable range of alternatives.

25. An adequate analysis of environmental effects of a project must also include a consideration of the direct, indirect, and cumulative effects of the project resulting from all past, present, and reasonably foreseeable future actions. *Id.* §§ 1508.7, 1508.8, 1508.25(c). Direct effects “are caused by the action and occur at the same time and place.” *Id.* § 1508.8(a). Indirect effects “are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.” *Id.* § 1508.8(b). Cumulative impacts are effects on the environment resulting from the incremental impacts of the present action, combined with other “past, present, and reasonably foreseeable future actions regardless of what agency . . . or person” undertook, undertakes or will undertake those actions. *Id.* § 1508.7. “Cumulative impacts can result from individually minor but collectively significant actions . . .” *Id.*

26. NEPA requires the EIS to “state how alternatives considered in it and decisions based on it will or will not achieve the requirements of . . . other environmental laws and policies.” 40 C.F.R. § 1502.02(d).

27. An agency has a continuing obligation to comply with NEPA and must prepare a supplemental NEPA analysis when “significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts” emerge. *Id.* § 1502.9(c)(1)(ii). An agency’s NEPA review is inadequate if it relies on outdated information or outdated NEPA documents.

28. Thus, NEPA prohibits major federal projects with significant environmental impacts from moving forward until a complete and legally adequate EIS has been developed with public participation.

Endangered Species Act

29. Congress enacted the ESA, in part, to provide a “means whereby the ecosystems upon which endangered species and threatened species depend may be conserved . . . [and] a program for the conservation of such endangered species and threatened species”

30. The ESA vests primary responsibility for administering and enforcing the statute with the Secretaries of Commerce and Interior. The Secretaries of Commerce and Interior have delegated this responsibility to NMFS and FWS, respectively.

31. Under the ESA, a species is considered endangered if it is in danger of extinction throughout all or a significant portion of its range. 16 U.S.C. § 1532(6). A species is considered threatened if it is likely to become endangered in the foreseeable future. 16 U.S.C. § 1532(20). NMFS and FWS have authority and responsibility to list and delist species. 16 U.S.C. § 1533.

32. When a species is listed as endangered or threatened, all federal agencies—including the Corps—must ensure that their programs and activities comply with the ESA.

33. To this end, section 7(a)(2) of the ESA requires that “each federal agency shall in consultation with and with the assistance of the [Services], insure that any action authorized, funded, or carried out by such agency [(“agency action”)] is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the [Services] . . . to be critical.” 16 U.S.C. § 1536(a)(2).

34. This “Section 7 consultation” process assists federal action agencies in complying with the section 7(a)(2) duty to guard against jeopardy to listed species or destruction or adverse modification of critical habitat. If the Service determines that a federal agency’s actions will likely jeopardize listed species’ existence or will destroy or adversely modify designated critical

habitat, the Service will include in its opinion an RPA. 50 C.F.R. § 402.14. Reasonable and prudent alternatives are “alternative actions identified during formal consultation . . . that the Director believes would avoid the likelihood of jeopardizing the continued existence of listed species or resulting in the destruction or adverse modification of critical habitat.” 50 C.F.R. § 402.02.

35. RPAs are alternative actions that (1) can be implemented in a manner consistent with the intended purpose of the action; (2) can be implemented consistent with the scope of the action agencies’ legal authority and jurisdiction; (3) are economically feasible; (4) are technologically feasible; (5) avoid jeopardizing the continued existence of the listed species; and (6) do not result in the destruction or adverse modification of critical habitat. 50 C.F.R. § 402.02.

36. BiOps provide advice to federal agencies in complying with the agencies’ duties under section 7 of the ESA. Federal agencies have no express obligation to implement a reasonable and prudent alternative; for a proposed action found to jeopardize the continued existence of a listed species and/or destroy or adversely critical habitat, an agency may alter its proposed action in a manner other than that specified in the RPA provided that the administrative record demonstrates that action to be implemented would avoid a violation of section 7(a)(2) of the ESA. *San Luis & Delta-Mendota Water Auth. v. Jewell*, 747 F.3d 581, 642–43 (9th Cir. 2014) (“[A]n action agency . . . has some discretion to deviate from the BiOp and its RPAs.”).

37. Action agencies implementing a BiOp must comply with NEPA when implementation of the BiOp alters the environmental status quo. *Id.* at 651–52 (holding that when the Bureau of Reclamation implements a BiOp and RPAs addressing the continued operations of its water projects, the Bureau must complete an EIS). Agencies may tier

environmental analyses to an earlier EIS. 40 C.F.R. § 1502.20. However, tiering is permissible only if the previous document actually discusses the impacts of the project at issue.

Migratory Bird Treaty Act

38. The MBTA implements various treaties between the United States and other countries (Canada, Mexico, Russia, and Japan) protecting migratory birds, and provides a variety of specific protections under federal law for these birds.

39. FWS has statutory authority to and responsibility for implementing and enforcing the MBTA.

40. The MBTA provides that “it shall be unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill . . . any migratory bird . . . or egg of any such bird” of any bird listed as protected under the MBTA. 16 U.S.C. § 703(a). Take is defined as “to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or the attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect.” 50 C.F.R § 10.12.

41. Section 704 of the MBTA authorizes FWS “to allow taking, hunting, capture, [or] killing” of birds protected under the MBTA so long as “compatible with the terms of the conventions” 16 U.S.C. § 704. Implementing regulations require all persons, including federal agencies, to “obtain a valid permit before commencing an activity” that will take, capture, or kill any birds protected by the MBTA. 50 C.F.R. §§ 13.1, 21.11. FWS may authorize the take of migratory birds under some conditions to minimize depredation, 50 C.F.R. § 21.41. However, FWS may not issue any take permit if the take would “potentially threaten[] a wildlife or plant population” 50 C.F.R. § 13.21(b)(4).

42. Federal Migratory Bird Depredation permit applications provide that “[the applicant] should apply for a depredation permit only after [nonlethal] deterrents such as hazing

and habitat modification prove unsuccessful. If a permit is issued, [the permittee] will be expected to continue nonlethal measures in conjunction with any killing or trapping authorized.”

43. The MBTA does not currently provide a mechanism for FWS to issue take permits for non-target bird deaths or injuries that occur incidental to bird killings authorized by a depredation permit under FWS’s MBTA regulations. *E.g.*, 50 C.F.R. § 21.48(d)(7) (explaining that the double-crested cormorant depredation order does not authorize the take of “look-alike species”). FWS in the past has taken the position that it has no authority to authorize such “incidental take” of non-target birds when it issues a permit to take depredating birds. However, news reports indicate that FWS is working toward enacting a rule authorizing the agency to grant permits for incidental take of migratory birds under certain circumstances.

44. Birds found in and around the Columbia River estuary, including double-crested cormorants, Brandt’s cormorants, pelagic cormorants, and brown pelicans, are protected under the MBTA. The Corps’ FEIS indicates that efforts to kill double-crested cormorants are likely to incidentally kill pelagic and Brandt’s cormorants, as well as possibly other birds protected under the MBTA. The Corps also acknowledges that eggs and chicks of parents killed will also be indirectly killed.

Water Resources Development Acts

45. The Water Resources Development Acts (“WRDA”) were enacted to provide for the conservation and development of various water resources.

46. WRDA 1996 Subsection 511(c) provides that “the Secretary [of the Army] shall carry out methods to reduce nesting populations of avian predators on dredge spoil islands in the Columbia River” so long as the action “is consistent with a management plan to be developed by” FWS. 16 U.S.C. § 3301 note, P.L. 106-53.

Administrative Procedure Act

47. The APA provides a private cause of action to any person “suffering legal wrong because of agency action, or adversely affected or aggrieved by agency action within the meaning of a relevant statute.” 5 U.S.C. § 702

48. Only “final agency actions” are reviewable. 5 U.S.C. § 704. A final agency action is one that marks the consummation of the agency’s decision-making process and one by which rights or obligations have been determined or from which legal consequences flow.

49. Under section 706 of the APA, a court must “hold unlawful and set aside agency action, findings, and conclusions found to be . . . arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706.

50. The APA provides a cause of action to challenge any final agency action where there is no other adequate remedy in court. 5 U.S.C. § 704. Neither NEPA nor the MBTA contain specific judicial review provisions, so federal agencies actions governed by these laws, including the cormorant EIS and hydrosystem management decisions, are therefore subject to judicial review under the APA.

FACTUAL BACKGROUND

Double-crested Cormorants

51. North America is home to six species of cormorants: Brandt’s, double-crested, great, neotropic, pelagic, and red-faced cormorants. For purposes of this complaint, “cormorant” will refer specifically to the double-crested cormorants; all other species will be identified by their individual species names.

52. Cormorants are large, prehistoric-looking diving birds with matte-black plumage. Breeding adults develop a pale, scalloped pattern on their backs and wings and have two black or

white tufts of feathers on the tops of their heads. Immature cormorants are grey or brown.

Cormorants float low on the surface of the water and are often seen standing on dry land with their heads raised and their wings open.

53. Cormorants are sociable birds. They usually nest in colonies, often mixed with wading and other birds, building nests in trees or on the ground near water. The clutch size is generally between three and four eggs. Incubation is done by both parents and typically lasts between 28 and 30 days. When cormorant chicks hatch, they are naked and feeble, with their eyes closed. Parents share in the chick-rearing responsibilities. Because nests are typically exposed to the sun, the adults shade the chicks and pour water into the chicks' mouths to keep the chicks cool. Chicks usually first fly at five to six weeks of age, then are generally independent at nine to ten weeks of age.

54. Cormorant adults are susceptible to predation by bald eagles, hawks, occasionally great horned owls, and brown pelicans. Eggs and chicks may be eaten by gulls, crows, jays, coyotes, foxes, and raccoons.

55. Cormorants have adapted to live in many different aquatic habitats. They often nest in trees near or over water, on sea cliffs, or on the ground on islands. Cormorants generally seek aquatic bodies large enough to support their mostly fish diet, but they may roost and form breeding colonies on smaller lagoons or ponds and then fly up to 25 miles to feeding areas. Cormorants also require perches to dry their feathers and loaf.

56. Cormorants are widely distributed, ranging from Alaska to northwest Mexico on the Pacific coast, and Newfoundland, Florida, Cuba, the Cayman Islands and Turks and Caicos on the Atlantic coast and Caribbean, as well as inland parts of the United States and Canada. Cormorants are divided into eastern and western populations, separated by the continental divide.

Although the eastern and western populations are not entirely isolated, relatively little intermixing occurs between the populations.

Western Population of Cormorants and East Sand Island

57. The western population of cormorants includes all breeding colonies within British Columbia, Washington, Oregon, Idaho, California, Nevada, Utah, Arizona, and the portions of Montana, Wyoming, Colorado, and New Mexico that lie west of the Continental Divide. The western population of cormorants is a management population within the Pacific Flyway.

58. Currently, the western population of cormorants is at least an order of magnitude smaller than its historic size; in 2009, the western population was approximately 31,200 breeding pairs. By contrast, historically, the largest colony in the western population lived on San Martin Island, Baja California. An estimate indicates that 213,500 breeding pairs existed on the island in the early 1900s, which dwarfs the present size of the entire Pacific Coast and much of the North American population. During the late 1800s and into the 1900s, cormorant populations declined substantially and colonies disappeared due to persecution by humans; people shot breeding cormorants and destroyed their nests. Humans also destroyed cormorant habitat for agricultural uses and water development projects. Additionally, populations dropped dramatically due to reproductive harms caused by widespread use of DDT.

59. Cormorant populations increased after the 1970s because they were added to the list of bird species afforded protection under the MBTA, and due to restrictions on DDT use in the United States. The western population of cormorants has increased, though not as rapidly as the eastern population. The growth in the west has been uneven since the late 1990s; rather than occurring across the entire western range, growth has largely occurred at one site, East Sand

Island in the Columbia River estuary. Even with the growth in population on the island, cormorant populations range-wide remain far below historic levels.

60. East Sand Island is a naturally-occurring island located eight river kilometers inland from the Pacific Ocean in the Columbia River estuary. The island was modified and expanded due to the Corps' use of the island as a disposal site for dredged material and bank stabilization activities, including the placement of rip rap, in the late 1970s and early 1980s.

61. As a result of these activities, East Sand Island became ideal habitat for many bird species including Cormorants, Caspian terns, Brandt's cormorants, pelagic cormorants, various species of gulls, and California brown pelicans. The Caspian tern population on East Sand Island is currently the largest in the world. This population is managed under the plan *Caspian Tern Management to Reduce Predation of Juvenile Salmonids in the Columbia River Estuary*, under which the Corps is in the process of redistributing about half of the East Sand Island Caspian tern colony to alternative colony sites in Oregon and California by 2015. Streaked horned larks, a species listed as threatened under the ESA, are also present on East Sand Island. Several raptor species, including bald eagles, live on the island and depend on cormorants as prey. Various species of waterfowl and shorebirds are also present on the island. Most, if not all, of these species overlap with cormorants.

62. Because of the large numbers and diversity of birds using East Sand Island, the island has been designated as an Important Bird Area by both the American Bird Conservancy and the National Audubon Society.

63. Cormorants first nested on East Sand Island in 1989 when fewer than 100 pairs were documented. The colony grew over time and peaked in 2013 with an estimated 14,900 breeding pairs. Birds congregate on the island because it provides good nesting habitat and a

steady source of food. They also congregate there because their traditional colonies have become inhospitable; humans have driven cormorants out due to concerns about fish predation, their habitat continues to be degraded and destroyed by humans, and climate change continues to adversely affect populations throughout the West.

64. Western colony declines were documented at the same time East Sand Island was experiencing growth. According to scientists the increase in cormorant population on the island was likely the result of individuals leaving other western colonies to immigrate to East Sand Island.

65. Today, the East Sand Island colony accounts for approximately 40% of the western population of cormorants and is the largest known breeding colony in existence. Western populations outside of this island have remained stable or are declining. Cormorants from the Columbia River estuary have demonstrated a strong connectivity with coastal breeding sites to the north but less so with southern coastal and inland sites. The number of coastal colonies north of East Sand Island, including the Salish Sea region, Strait of Juan de Fuca, and the outer coast of Washington, has declined by about 50% since the early 1990s and the number of breeding pairs in the remaining northern coastal colonies has declined by 66%.

66. The Oregon coast population is small compared to the number of birds nesting on East Sand Island. The Oregon coast population outside the Columbia River Estuary represents a total of 2,463 breeding pairs—less than 8% of the total western population. Currently, the colonies on the Oregon coast are experiencing pressure from the Oregon Department of Fish and Wildlife (“ODFW”), which is hazing cormorants in six locations including Nehalem River, Nestucca River, Coquille River, Tillamook Bay, Alsea Bay, and Astoria. ODFW has also

received permits to take up to fifty cormorants in Tillamook and at the mouths of the Rogue and Umpqua Rivers for research purposes.

67. Inland colonies in Oregon and northern California have experienced large inter-annual variability. Nesting at historically large colonies, including Malheur National Wildlife Refuge, Lower Klamath National Wildlife Refuge, and Clear Lake National Wildlife Refuge, has been greatly reduced or eliminated in recent years due to severe drought and human water use. Mullet Island in the Salton Sea in Southern California was a major nesting ground for about 13%, or 6,000 breeding pairs, of cormorants during 2009–2010. With water levels receding, the current water depth surrounding the island is no longer sufficient to prevent access by mammalian predators. FWS acknowledged that “cormorants have not successfully bred at the Salton Sea for the last three years” and that “a complete loss of this colony site in future years is anticipated.”

68. Colonies in British Columbia have declined to such an extent that cormorants are designated as being at risk, and are considered to be “of special concern” under British Columbia’s Conservation Framework.

69. FWS explained in its Draft Environmental Impact Statement (“DEIS”) that “colonies in Coastal British Columbia, Washington, and southern California have been in decline for two decades.” FWS explained that “[s]ince much of the initial growth in the East Sand Island colony was likely due to immigration from other colonies in the western population, especially those in British Columbia and Washington, and suitable nesting habitat continues to be lost (due to urbanization and climate change), it is likely that many of the remaining colonies are at or near carrying capacity.” The States of Oregon and Washington have produced maps indicating that

they view much of or even most of their territory as off limits to increased cormorant populations. Thus, future growth at these colonies is unlikely.

70. With the increase in cormorant populations over the last four decades came feelings of anger and hatred toward cormorants. Humans have demonized cormorants because people often hold unsubstantiated beliefs that cormorant behaviors conflict with various human interests. Thus, cormorants have been become a scapegoat species, and have been killed throughout their range. In the United States and Canada, pockets of citizens work toward—and often succeed in—removing cormorants from their natural habitats because the people believe that cormorants destroy vegetation, compete with more valued species (including, for example, snowy egrets), and overindulge in fish.

71. Cormorants are widely persecuted and killed in other areas of the United States. Linda R. Wires, a leading expert on cormorants and author of many cormorant studies, has likened such management actions to a “witch hunt” because humans have “zero tolerance for cormorants.”

72. Negative feelings toward cormorants and persecution of these birds are not new phenomena. Cormorants have had a bad reputation in literature beginning with the Bible, where cormorants are described as unclean and connected with death. The adjective “cormorous” has been used to mean greedy, insatiable, or ravenous. Shakespeare used cormorant as a synonym for voracious. However, the accusation that cormorants have an unusually large appetite is misplaced. Cormorants, on average, eat about one pound of fish per day, which is much less than what a pelican of the same body size eats. And yet, pelicans are still well-loved despite growing populations. Some scientists believe that cormorants make easy scapegoats because their hunting is so visible to people. They often forage by docks and in bays, and can be seen

slurping down fish and eels that seem too large for the bird to swallow. Their scapegoat status is also enforced by the fact that they are unattractive by some standards and they congregate in large colonies, giving the appearance that they are overabundant.

73. Cormorants forage by diving from the surface of the water and swimming, propelled by their webbed feet and sometimes their wings. They can dive as deep as 60 feet below the surface and can stay underwater for up to 70 seconds. However, cormorants prefer to forage at mid- to upper-levels of the water rather than near the bottom. Typically, they eat a wide variety of fish, crabs, shrimp, crayfish, frogs, salamanders, and sometimes snakes, mollusks, and plant material.

74. On East Sand Island, northern anchovy is the most prevalent cormorant prey type, followed by various marine and freshwater fishes including flounder, sculpins, and surf perch. East Sand Island cormorants also consume salmonids, pikeminnow, carp, shad, and many other kinds of fish.

Endangered and Threatened Salmonids

75. Pacific salmon and steelhead are salmonids, of the scientific family *Salmonidae*. They are anadromous fish, meaning they migrate up rivers from the ocean to breed in fresh water. They are of the scientific genus *Oncorhynchus*, which includes sockeye, chum, Chinook, and coho salmon, and steelhead trout. These five species use the Columbia River and its tributaries in their life cycles—they migrate through the Columbia River Estuary to the Pacific Ocean as juveniles and migrate back through the estuary to breed in fresh water as adults.

76. Within the five species, thirteen different groupings, referred to as ESUs or Distinct Population Segments (“DPSs”), are specifically listed as threatened or endangered under the ESA. ESU designations are used for the four species of Pacific salmon and DPS

designations are used for steelhead in the Columbia River Basin. Under the Services' DPS policy, the definitions of ESU and DPS are essentially the same: A population that is substantially reproductively isolated from other units within the species and represents an important component of the evolutionary legacy of the species. 61 Fed. Reg. 4722, 4722 (Feb. 7, 1996). Thus, if a population qualifies as an ESU, it also is a DPS and may be listed under the ESA. *Id.*

77. NMFS implements the ESA with respect to listed salmonids.

Effects of Cormorant Consumption on Salmonid Survival

78. Cormorants are opportunistic and generalist feeders, meaning they prey on many species of fish, but not surprisingly, tend to concentrate on those easiest to catch. Cormorants usually eat fish between five and fifteen centimeters in length. They eat a wide variety of fish—more than 250 fish species have been reported as cormorant prey.

79. In 1997, the Corps began funding studies to monitor the size, productivity, and diet of cormorant colonies in the Columbia River estuary. The percentage of the cormorants' diet that is made up of salmonid species varies both spatially and temporally.

80. The East Sand Island cormorant colony's consumption rates on juvenile salmonids vary greatly each year. Bioenergetics models estimate that total annual smolt consumption between 2003 and 2013 by the island colony has varied between 2.4 and 20.5 million smolts.

81. Studies show that juvenile salmonid consumption rate by cormorants varied widely despite the size of the cormorant colony on East Sand Island remaining relatively stable. Indeed, a study explained that “[c]ormorant colony size has been relatively stable since 2006; changes in colony size have not explained recent variability in cormorant smolt consumption.”

The study goes on to explain that its results “indicate that [despite the population of the East Sand Island cormorant colony peaking at an all-time high in 2013], impacts on salmonid survival were lower in 2013 compared to 2012” Thus, the study explains, cormorant “colony size [on East Sand Island] was not a good predictor of impacts on salmonids in 2013.”

82. The Corps has explained: “Factors driving the large inter-annual variation in predation impacts (consumption and predation rates) include, but are not limited to: environmental conditions as they affect the timing, abundance, and availability of forage fish in the estuary (e.g., river discharge, tidal volume, sea surface temperature, upwelling timing and strength), differences in [cormorant] abundance, nesting chronology, and nesting success, and large-scale climatic factors that influence both the prey and predator” A study concluded that “[i]n aggregate, environmental factors explained a greater portion of variability in cormorant predation [than did cormorant population size], and at least one other factor (river discharge) appears to be as important as colony size in determining levels of cormorant predation on smolts.”

83. Recent research “indicated that fish in poor condition (i.e., diseased, injured, or otherwise compromised) were more susceptible to [cormorant] predation than apparently healthy smolts. Fish in poor condition would likely be more vulnerable to other sources of mortality, such as predation from other species, or mortality caused by passage through the dams. If [cormorant] predation were decreased, these fish would still have a high probability of dying from other mortality factors, which would likely compensate for a reduction in [cormorant] predation.” Lower levels of predation were observed in seemingly healthy smolts. This population dynamic is called compensatory mortality, which is defined as one type of mortality largely replacing, or compensating, for another kind of mortality, but the total mortality rate of

the population remains constant. So, if one source of mortality is reduced, the mortality rate will remain constant because other sources will make up for reduced mortality. In contrast, additive mortality is a type of mortality in which one source of mortality is added to another for a combined total effect, increasing the overall mortality rate. Thus, when an additive source of mortality is reduced, the overall mortality rate will decrease.

84. Additionally, several studies have concluded that hatchery-reared salmonids were more susceptible to avian predation than were their wild counterparts. Nathan J. Hostetter, *Susceptibility of Juvenile Steelhead to Avian Predation: The Influence of Individual Fish Characteristics and River Conditions*, 141 Transactions of the Am. Fisheries Soc’y 1586, 1596 (2012) (“[D]ouble-crested cormorants disproportionately consumed hatchery-reared steelhead relative to wild-origin steelhead”); see also Collis et al., *Colonial Waterbird Predation on Juvenile Salmonids Tagged Passive Integrated Transponders in the Columbia River Estuary*, 130 Transactions of the Am. Fisheries Soc’y 385 (2001); Ryan et al., *Relative Vulnerability to Avian Predation of Juvenile Salmonids Tagged with Passive Integrator Transponders in the Columbia River Estuary, 1998–2000*, 132 Transactions of the Am. Fisheries Soc’y 275 (2003); Kennedy et al., *Relationship Between Smolt Gill Na^+ , K^+ ATPase Activity and Migration Timing to Avoid Predation Risk of Steelhead Trout (*Oncorhynchus mykiss*) in a Large Estuary*, 64 Canadian J. Fisheries & Aquatic Scis. 1506 (2007).

85. Cormorants also eat species of fish that are known to prey on or compete with salmonids. NMFS explained that “[i]nteractions between native/non-native predators and other components of the food web can have implications for salmon populations.” One study concluded that East Sand Island cormorants’ diets consist of approximately five percent minnow and carp. Northern pikeminnows are the primary prey species for cormorants after salmon

smolts have left the estuary. So, “removal of avian predators could result in increased predation [on juvenile salmonids] by pikeminnows.” Additionally, cormorants eat non-native American shad. Although not known to eat salmonids, shad are known to exert tremendous pressure on the food web given the sheer weight of their biomass. American shad reduce the abundance of *Daphnia* in the Columbia River mainstem reservoirs, thereby reducing this important food source for subyearling fall Chinook. Thus, an increase in American shad abundance could adversely affect salmonids.

86. Several factors limit salmonid survival. Limiting factors are defined as “[p]hysical, chemical, or biological features that impede species and their independent populations from reaching viability status.” According to a study, limiting factors are likely to include “marine forage fish availability, river discharge, ocean conditions, and others . . . ,” however, according to the study, these factors have not been adequately studied. The *Estuary Module* from 2011 includes information from a study commissioned by NMFS as part of its salmonid recovery planning. The goal of the module was to identify and prioritize management actions that, if implemented, would reduce the impacts of limiting factors. The module identified the most important, or “top,” limiting factors: flow-related habitat and plume changes due to operations of hydropower dams, water temperature changes, and reduced macrodetrital inputs—all of which result from dam operations. Limiting factors in a category of somewhat lesser impacts (labeled “high”) include sediment and nutrient-related estuary habitat changes, bankfull elevation changes, native bird predation (including Caspian terns, cormorants, and gulls), native pinnipeds, and non-bioaccumulative toxicity. Cormorants are thought to contribute to about half the avian predation (as between Caspian terns and cormorants) on salmonids in the estuary, so logically, cormorant predation alone could be less than a “high” limiting factor. The

module stressed that “the most important take-home message of the estuary plan module is that recovery of listed ESUs in the Columbia River may not be possible without properly functioning estuary and plume ecosystems.”

87. Hydropower dams also account for a substantial percentage of salmonid mortality; some salmonids must pass through up to eight dams to get to the estuary. A study indicates that reducing fish travel time would likely increase survival rates. To increase survival, dam operators would likely have to increase dam spill percentages and reduce travel time, which would mean reducing reservoir elevations and/or increasing river flow rates.

88. Other management plans addressing the health of the Columbia River estuary ecosystem focus on improving salmonid habitat and on altering dam operations to improve salmonid survival—none have concluded that killing cormorants was necessary for salmonid survival. For example, the Environmental Protection Agency (“EPA”) operates the National Estuary Program (“NEP”) under the Clean Water Act (“CWA”) to protect and restore the water quality and ecological integrity of estuaries of national significance. 33 U.S.C. § 1330. The CWA calls for each NEP to develop and implement a Comprehensive Conservation and Management Plan (“CCMP”), which is a long-term plan that contains specific targeted actions designed to address water quality, habitat, and living resources challenges in its estuarine watershed. *Id.* The Columbia River estuary’s CCMP was first created in 1999 and was updated in 2011. Its top priority issues are biological integrity, habitat loss and modification, impacts from human activity, conventional pollutants, toxic contaminants, institutional constraints, and public awareness and stewardship. The CCMP explained that its role is to “focus on factors that may affect salmonids in the lower river” It would do this by “protecting, enhancing and restoring critical in-river and riparian habitat; improving water quality; minimizing institutional

constraints through improved coordination; and fostering a sense of river stewardship through education and outreach programs.” One of the key restoration strategies specified by the CMMP is to “[e]stablish and maintain Columbia River flows to meet ecological needs of the lower Columbia River and estuary.”

89. Additionally, the state of Oregon has consistently requested that NMFS consider changes to hydrosystem operations that would modify flow, spill, and reservoir elevation changes in order to increase juvenile salmon survival; studies show that such changes can substantially increase survival of juvenile salmonids. NMFS refused to consider these changes as part of its recovery planning process, and refused to make such changes part of the RPA in its BiOps on hydrosystem operations. The action agencies have not analyzed under NEPA a hydrosystem operations plan consistent with Oregon’s requested operations.

Reasonable and Prudent Alternative 46

90. The Corps and the Bureau operate and maintain the FCRPS. BPA markets the power generated from the hydrosystem dams.

91. In 1995, the Corps, the Bureau, and BPA published the System Operation Review Environmental Impact Statement (“SOR EIS”), largely in response to the listings of several salmonid species. The SOR EIS was a hydrosystem-wide NEPA analysis that included an alternatives analysis that encompassed a variety of system-wide changes to hydropower operations. The preferred alternative included in river migration, barge transportation, fish passage objectives, spill at projects, flow augmentation, flow targets, and reservoir drawdowns. Records of Decision implementing aspects of the SOR EIS were issued in 1997. The Corps has not completed another SOR EIS since 1995.

92. Because the dams adversely affect salmonids and their habitat, the Corps, along with BPA and the Bureau must formally consult with NMFS to ensure their actions are not likely to jeopardize the continued existence of ESA-listed salmonids or adversely modify their critical habitat.

93. NMFS concluded in its 2000 BiOp that a ten-year operation for the FCRPS would likely jeopardize the continued existence of eight listed salmonid ESUs and adversely modify the associated critical habitat. Although the Federal District Court invalidated the 2000 BiOp, no fault was found with the jeopardy and adverse modification findings, so NMFS issued subsequent BiOps based on the determination that continued operation of FCRPS would result in jeopardy and adverse modification of critical habitat.

94. In 2007, the Corps, the Bureau, and BPA completed a Biological Assessment in response to a court-ordered remand of the 2004 BiOp, in which, contrary to usual practice, these agencies suggested a RPA that they believed would offset the jeopardy finding. The agencies explained “rather than engaging in an iterative process of submitting a proposed hydro operation and then having NMFS suggest mitigation in the form of a RPA, the Action Agencies have instead proposed a RPA that includes the hydro operation and a full mitigation package.” The agencies explained that they “recognize that under 16 U.S.C. § 1536(b)(3)(A), NMFS is responsible for suggesting a RPA. However, neither the ESA nor the consultation regulations, prohibit the Action Agencies from suggesting a RPA.” The RPA actions, many of which have nothing to do with operations of the FCRPS itself, included improving fish passage at dams, managing river flow, improving tributary and estuary habitat, reforming hatchery practices, and controlling predators that prey on juvenile salmonids. Under Action 46, the agencies would monitor and evaluate the cormorant population in the Columbia River estuary. The agencies did

not conduct a NEPA alternatives analysis for hydrosystem operations in the process of developing their 2007 Biological Assessment.

95. In its 2008 BiOp, NMFS accepted the RPA and concluded that through implementation of the recommended RPA actions, the operation of the FCRPS would not likely jeopardize ESA-listed salmonids, and would likely avoid destroying or adversely modifying designated critical habitat for these ESUs.

96. The 2008 RPA include actions to reduce predation in the mainstem Columbia River and estuary by Caspian terns, northern pikeminnows, and California sea lions. Thus far, agencies have implemented programs to reduce predation by all three predators.

97. The 2008 RPA Action 46 recommended that action agencies develop a cormorant management plan encompassing additional research, development of a conceptual management plan, and implementation of warranted actions in the estuary to increase juvenile salmonid survival.

Supplemental BiOp Amendments and Modifications to RPA 46

98. In 2010, NMFS amended RPA Action 46, in the 2010 Supplemental BiOp to include “the option of more aggressive, targeted predator control actions in the event of a significant decline in the natural abundance of one or more [salmonid] species.” NMFS explained that it chose to amend Action 46 because it had newly considered effects beyond those considered in 2008, including “predation on steelhead subyearling Chinook (and to a lesser extent, yearling Chinook and sockeye salmon) by [cormorants] in the estuary.” NMFS reasoned that because the “2008 BiOp only partially addressed increased predation by . . . cormorants in the current period,” compared to the 2008 BiOp’s base period, the juvenile survival of salmonid species “decreased from the 1980s to the current period and this change was not fully reflected in

the 2008 BiOp's 'base-to-current' multipliers." Thus, according to NMFS, juvenile salmonid predation rates were higher than the rates reflected in the 2008 BiOp, particularly for upriver steelhead ESUs and Lower Columbia River Chinook ESU, largely due to predation by cormorants.

99. The new information NMFS cited in the 2010 Supplemental BiOp "represents a combination of some factors that are better than anticipated in the 2008 BiOp and some that are more negative." The positive factors include "[s]lightly reduced rates of cormorant predation on yearling Chinook and steelhead in the estuary in recent years." The negative factors include "[i]ncreased rates of cormorant predation on subyearling Chinook from the Lower Columbia River ESU in the estuary in recent years." NMFS concluded in the 2010 Supplemental BiOp that "these factors, when considered together and in the context of the original analyses in the 2008 BiOp *do not represent a significant deviation from the conditions analyzed and anticipated.*" (emphasis added). Therefore, NMFS based its amendment of Action 46 on this new information, even though NMFS concluded that the new information was not significantly different from what was known and expected from the analysis in the 2008 BiOp.

100. In the 2014 Supplemental BiOp, NMFS modified RPA Action 46, "calling upon the Corps to reduce cormorant predation in the estuary to Base Period Levels (no more than 5,380 to 5,939 nesting pairs on East Sand Island)." NMFS got to this number by conducting a "survival gap" analysis looking at the difference between cormorant predation during the base period (1983–2002) and the current period (2003–2009) (although NMFS provided no explanation for why it chose 1983–2003 as the base period). NMFS "estimated a 97.1 percent survival rate (i.e., 2.9% [cormorant] consumption rate) for juvenile steelhead during the 'base period' compared to 93.5 percent (i.e., 6.5% [cormorant] consumption rate) in the 'current

period,’ [which is] a base to current gap of 3.6 percent.” NMFS concluded “that a reduced [cormorant] breeding population of 5,380 to 5,939 breeding pairs on East Sand Island would restore juvenile steelhead survival to the environmental baseline or ‘base period’ levels.”

101. In the 2014 Supplemental BiOp, NMFS stated, without explaining its rationale, that “it is logical that cormorant management objectives assist in th[e] goal” to recover salmon. NMFS did not provide support for this conclusory statement and did not explain why reducing cormorant predation is more logical than other actions that NMFS ignored that could prove more beneficial to salmonids. In fact, the BiOp specifies that “the shortfall (or gap) [in salmonid productivity] can be addressed with *any* actions that improve [salmonid] productivity.” Indeed, drastically reducing the population of a native species that evolved with salmon for millennia for the purpose of reducing natural predation on salmonids imperiled by human activities seems illogical. Because NMFS provided no basis for its statement that it is “logical” to manage cormorants to remedy a problem caused by humans, its recommendation does not constrain the Corps in defining the EIS’s purpose and need or in its selection of alternatives to analyze under NEPA.

2014 Supplemental Record of Consultation and Statement of Decision

102. In response to NMFS’s 2014 Supplemental BiOp, the Corps issued a *Supplemental Record of Consultation and Statement of Decision* (“ROCASOD”) to set forth the Corps’ decision to continue implementing the RPAs. The Corps explained in the ROCASOD that it “believe[d] that the effects of the action are within the range of the analyses conducted in the existing NEPA documents.” The Corps relied on: individual project EISs, the 1992 Columbia River Salmon Flow Improvement Measures Options Analysis EIS and its 1993 Supplement, and the SOR EIS concluded in 1997 (which is the only comprehensive NEPA

analysis of the FCRPS). The Corps also relied on NEPA documents that assessed very specific projects—Lower Snake River Juvenile Salmon Migration Feasibility Report/EIS, the Upper Columbia Alternative Flood Control and Fish Operations EIS, the Albeni Falls Flexible Winter Operations Environmental Assessment (“EA”), and the Inland Avian Predation Management Plan and EA. Therefore, the Corps essentially tiered its management plans, including the cormorant management plan, off of the only comprehensive FCRPS alternatives analysis, which was completed about twenty years ago. Because the Corps has repeatedly and consistently chosen to implement individual RPA actions and the Corps tiered the management plans off the twenty-year-old alternatives analysis, it concluded that it need not conduct a new FCRPS alternatives analysis. Consequently, under the Corps’ rationale, it need only conduct limited alternatives analyses under the individual management plans, thus limiting the range of alternatives the Corps must consider, without ever having to consider system-wide alternatives.

103. Under this rationale, the Corps has repeatedly chosen to maintain the status quo with regard to the FCRPS by implementing the individual RPA actions that the agency itself created, despite evidence that alternatives the Corps has never considered, or that the agency has not considered for 20 years, could result in higher survival rates for listed salmonids.

The Environmental Impact Statement

104. The Corps chose to implement the RPA and developed a management plan to reduce the cormorant population to the base period—the EIS—to comply with NMFS’s recommendation. The Corps published the DEIS on June 12, 2014 and issued a public notice and sought public comment on the DEIS between June 12, 2014 and August 4, 2014. Plaintiffs submitted timely and extensive comments pertaining to the DEIS. The Corps published the FEIS February 6, 2015 and opened another notice and comment period between February 13, 2015 and

March 16, 2015. Plaintiffs submitted timely comments pertaining to the FEIS. The Corps issued a Record of Decision (“ROD”) on March 19, 2015.

105. The Corps explained in the EIS that the Water Resources Development Act of 1996 subsection 511(c) gives the Corps the authority to implement the cormorant management plan. However, management of avian predators under Subsection 511(c) must be consistent with a management plan developed by the FWS. FWS has developed no such plan for cormorants. Thus, the Corps has no legal authority to control cormorants.

106. Further, Because the Corps has limited itself to implementing NEPA in a manner solely focused on implementing specific individual RPA measures, the Corps’ purpose and need statement for the agency’s cormorant management strategy is very narrowly defined. The Corps’ stated purpose for the cormorant management plan is “to reduce [cormorant] predation of juvenile salmonids in the Columbia River Estuary to levels identified in the environmental baseline (base period) of the 2008/2010 FCRPS Biological Opinion.” The Corps explained “[t]o meet this purpose, the management objectives identified in the revised RPA Action 46 for juvenile salmonid survival and associated [cormorant] colony size (5,380 to 5,939 breeding pairs on East Sand Island) based on [NMFS] analysis are being used for management objectives.” So the Corps essentially explains that its purpose and need is to implement RPA Action 46. According to the 2008 BiOp, the purpose for adopting RPAs was to address deficiencies in the proposed FCRPS plan, which was likely to jeopardize the continued existence of *listed* salmonid species. Thus, the overall purpose for implementing the RPAs is to increase salmonid survival of listed stocks to prevent jeopardy; implementing RPA Action 46 thus would not make sense without some associated benefit to listed salmonids.

107. The EIS's purpose and need and range of alternatives address just one small aspect of the large, complex issue of human and non-human actions that contribute to mortality of salmon and steelhead. The Corps limited itself to analyzing only those alternatives that reduce the cormorant population size on East Sand Island, even though the DEIS admits "[a]vian predation is generally acknowledged as a factor affecting certain listed ESUs/DPSs, though not necessarily a factor contributing to their decline or limiting their recovery." Despite acknowledging that "[t]here are many causes of mortality to juvenile salmonids" including hydropower dams (which decreases estuary plume size and reduces flow thus reducing sediment movement downstream), degraded habitat conditions (including water temperatures "at the upper limits of tolerance for salmonids"), hatchery management, and loss of habitat, the Corps excluded measures designed to address these factors from consideration in its recent EIS on cormorant management. Remarkably, at the same time, the cormorant EIS explained that "[m]ore than any other past action, the management of the Columbia River has most affected environmental conditions for the resources described in this document" including listed salmon and steelhead ESUs and cormorants.

108. The Corps explained that it had no choice but to develop and implement the cormorant management plan because it "is a requirement from the Corps' consultation under the [ESA] with [NMFS] for the operation of the hydropower dams that make up the [FCRPS]." Accordingly, the Corps reasoned that it chose to limit its consideration of alternatives to reducing the cormorant population on East Sand Island because "alternative courses of action would not achieve the specific objective of RPA action 46 (reducing [cormorant] predation), and these other courses of action are more relevantly addressed in other RPA actions, such as those specific to dam operations" However, because the Corps has not conducted a NEPA

alternatives analysis for the FCRPS and the RPA actions do not generally address dam operations, changes in the FCRPS are effectively off the table. In reality, the Corps tied its own hands because it created the RPAs and it has refused to consider system-wide changes to the FCRPS. The Corps has an independent duty to assess its obligations and to ensure compliance with the law, including NEPA. Thus, the Corps is not required to blindly implement the RPAs with no analysis of alternative means of improving salmon survival.

109. To meet the stated purpose, the Corps analyzed five alternatives in the FEIS: (A) No action; (B) Non-lethal management focus with limited egg take; (C) Culling with integrated non-lethal methods including limited egg take; (C-1) Culling with egg oiling and integrated non-lethal methods (Preferred Alternative) and (D) Culling with exclusion of double-crested cormorant nesting on East Sand Island in Phase II. With the exception of the “no action” alternative, all include some form of cormorant take and dispersal.

110. Alternative A proposes that the Corps would take no actions to manage the East Sand Island cormorant colony. Thus, the DEIS concluded “[s]urvival improvements for juvenile salmonids would need to be made up with other actions within the purview of the [FCRPS].”

111. Alternative B would involve dispersing more than 7,500 breeding pairs off East Sand Island over a four-year period to achieve a colony size of 5,600 breeding pairs. The Corps would also have the option of taking up to 500 eggs on East Sand Island and 250 in the Columbia River estuary. To render part of East Sand Island uninhabitable, the Corps would modify the terrain and would inundate the western portion of East Sand Island.

112. Alternative C would involve culling 18,185 cormorants (25% of the western population), to achieve the target colony size of approximately 5,600 breeding pairs over a period of four years. Following the four years of culling of cormorants, habitat on East Sand

Island would be modified through inundation and hazing strategies would be implemented to attempt to maintain target colony size.

113. Alternative D would involve killing cormorants to reduce the population to a target of 5,600 breeding pairs followed by hazing and terrain modification to permanently disperse the remaining 5,600 breeding pairs from East Sand Island.

114. The Corps selected Alternative C-1 is the preferred alternative. Alternative C-1 will be implemented in two phases. During Phase 1, which will extend over a four-year period, the Corps and its contractor, United States Department of Agriculture Wildlife Services (“Wildlife Services”), intend kill a total of 10,912 cormorants and destroy 26,096 cormorant nests to achieve a target population of 5,380–5,939 breeding pairs. The total take of adult cormorants accounts for 15% of the entire cormorant population west of the Rocky Mountains.

115. The Corps will utilize two methods to achieve the goal of killing 10,912 cormorants. Between early April and the post breed dispersal period, cormorants will be shot with shotguns by boat-based government agents as they forage for food in the waters surrounding East Sand Island. Because this activity will extend throughout the nesting season, the birds will likely have active nests. Eggs in these nests will fail and chicks in these nests will be left to starve to death.

116. Additionally, sharpshooters on multiple elevated platforms at the edge of the East Sand Island cormorant colony will use night vision goggles and high-powered rifles to shoot cormorants at night on their nests as they tend to their eggs or chicks. Government agents will enter the colony the following morning to collect carcasses. The Corps anticipates 6 to 8 shooting events on the island per nesting season. Notably, the Corps states that it intends to initiate lethal control activities prior to the onset of nesting to determine the feasibility of lethally

removing individuals without causing excessive cormorant dispersal and to minimize the minimize actions during the chick rearing stage. However, during this first season of killing at the colony, the Corps will not be able to get this early start due to the late dates on which both the Corps and FWS issued their RODs. Nest initiation typically begins on March 27, but FWS did not issue their ROD and depredation permits until more than two weeks after this date on April 12. As a result, if the Corps proceeds with shooting at the colony during the 2015 nesting season, it will do so on a timeline that prevents it from testing the feasibility of its approach prior to the onset of nesting and which ensures, contrary to assurances in the FEIS, that in fact much of the slaughter of adults will occur as the birds care for live chicks in their nests.

117. The Corps will also utilize two strategies to achieve its target of destroying 26,096 nests over the four-year implementation period. First, government agents will enter the colony a minimum of four times during the nesting season and spray eggs with oil to suffocate developing embryos. Oiling eggs will account for the take of 5,870 nests in the first year, 5,247 nests in the second year, and 4,058 nests in the third. Second, the Corps acknowledges that as many as 10,912 nests could fail, either through egg loss or starvation of chicks as a result of their parents being shot over water. This “associated nest loss” accounts for the take of 3,489 nests in the first year, 3,114 nests in the second, 2,489 nests in the third, and 1,902 nests in the fourth year.

118. In Phase 2 of Alternative C-1, the Corps will use hazing techniques and reduce available cormorant nesting habitat to maintain target cormorant populations numbers on East Sand Island.

U.S. Fish and Wildlife Service Depredation Permit Record of Decision

119. On April 13, 2015, FWS issued a Record of Decision (“FWS ROD”) for the Corps’ request for a depredation permit to implement Alternative C-1. FWS outlined four

options: 1) Outright Denial, 2) Partial Denial, 3) Issue a Depredation Permit for Action Described in the Permit Application, and 4) Issue a Depredation Permit with Additional Conditions.” Based on its analysis, FWS chose alternative 3 and issued depredation permits that allow for the take of 3,489 individual cormorants and 5,879 cormorant nests, as well as 105 Brandt’s cormorants and 10 pelagic cormorants during the 2015 nesting season. Additional permits to complete the project are anticipated in 2016, 2017, and 2018.

120. This permit has significant flaws. First, the permit does not account for significant cormorant take that will occur as a result of the proposed action. The Corps’ FEIS and ROD calls for killing 3,489 individual cormorants, a loss of 5,879 nests due to oiling of eggs, and a possibility of a loss of 3,489 nests as eggs or young are orphaned after parents are shot. However the Corps’ permit application only requests permits for two of these causes of mortality: 3,489 cormorants killed by shooting and 5,879 cormorants taken by nest destruction. Correspondingly, FWS issued depredation permits under the MBTA only for these two causes of mortality. As a result, significant take that both the Corps and FWS acknowledge may occur as a result of the Corps’ depredation activity is not permitted and would violate the MBTA.

121. Second, FWS highlighted that one of the main factors in reviewing the application is “the action must not potentially threaten a wildlife or plant population.” Indeed, MBTA regulations provide that FWS may not issue a depredation permit when it would potentially threaten wildlife. However, permits that FWS issued in fact will do exactly that. The FEIS and the FWS ROD both acknowledge that the adopted alternative will drop cormorant populations in the western region below levels that the Corps and USFWS have defined as sustainable. The Corps and FWS have selected 1990 population levels (about 41,660 individuals) as a sustainable population. However, the adopted alternative will reduce western populations to approximately

38,500 individuals, well below the population level defined as sustainable. The FEIS defines a sustainable population as “a population that is able to maintain a long-term trend with numbers above a level that would not result in a major decline or cause a species to be threatened or endangered.”

122. FWS relies on the hope that after a period of four years below sustainable population levels, cormorant populations will begin to rebound, as a way to circumvent this issue. It also relies on monitoring of populations as a strategy to ensure that western cormorant populations will not be placed in jeopardy. However, FWS cannot avoid the fact that the permits that it will issue to allow this project to move forward are in fact designed to drive cormorant populations below levels that FWS itself has defined as sustainable and where, by definition, a population is vulnerable to suffering a “major decline.” Such an assumption is highly speculative and uncertain.

123. In fact, the EIS provides reason to believe that reducing the East Sand Island colony size by the magnitude described in the management plan could have detrimental effects on the entire western population of cormorants. The Corps concluded in the DEIS that western cormorant populations “could remain static [after reducing the population to 1990 levels] since most of the growth since 1990 occurred on East Sand Island.” While the assertion that most of the growth occurred on East Sand Island is true, the Corps assumes without providing adequate support that cormorant populations outside of the Columbia Estuary are relatively stable. To support its assumption, the Corps states that the major factors that led to cormorant declines over the past century—including hunting and harassment by humans, colony disturbance, egg collecting, and environmental contaminants—have been “reduced or eliminated.” Because these issues have been largely eliminated and current laws are adequate to protect cormorant

populations, the Corps concludes the western population of cormorants will remain stable after reducing the size of the East Sand Island colony to about 5,600 breeding pairs.

124. However, the Corps failed to adequately address threats to the western cormorant population, including predation, climate change, human disturbance, environmental contaminants, oil pollution, development impacts, disease, and decline of cormorants' forage base. Given the magnitude of the proposed population reduction and the permanent habitat limitations that would be implemented at the only cormorant colony that is currently adding substantially to the western cormorant population, the Corps must examine these threats and how they will affect a smaller population of cormorants in the West. The Corps in the FEIS explained that it based its conclusion that the population will remain stable at ca. 1990 levels on a 2010 study that showed that without the increase in population on East Sand Island, the population in 2010 would have been ca. 1990 levels. "In other words, the sum of the breeding colony counts of the western population (excluding [East Sand Island]) ca. 2009 is similar to that observed in ca. 1990." However, the Corps neglected to take into account more recent population trends. For example, the Salton Sea was a major nesting ground in 2010, with approximately 6,000 cormorant breeding pairs. But, in 2013, the colony was abandoned due to falling water levels and scientists do not expect the colony to rebound because the effects on this colony are largely caused by climate change and increased predation on cormorants by eagles. Given the declines and unstable nature of many western cormorant colonies, the Corps must justify its conclusion that the western population will "remain static" after culling almost 11,000 individuals and destroying twice as many nests from East Sand Island.

125. Additionally, if the Corps reduces cormorant populations on East Sand Island, the likelihood that cormorants will continue to immigrate to East Sand Island from other western

colonies is high if habitat on East Sand Island remains ideal. The Corps explained that under the management plan, lethal management would last four years. However, if cormorants from other colonies immigrate to East Sand Island as they did previously, the Corps would need to continue killing cormorants indefinitely to maintain a population of 5,600 breeding pairs on East Sand Island. This prolonged killing of cormorants from other colonies would essentially create a population sink that could result in significant population declines for western cormorants. The Corps did not address this reasonably foreseeable possibility in the EIS.

126. Likewise, monitoring in no way provides assurances that populations will rebound. FWS turns the purpose of monitoring on its head; monitoring is typically done to ensure that populations never dip below sustainable levels, not to document that unsustainable population levels have been achieved. The permits that FWS has issued by their own definition “potentially threaten” cormorant populations and therefor violate the MBTA.

127. Third, FWS incorrectly asserts that the Corps has demonstrated that it has met the depredation permit requirement that “sufficient practicable nonlethal methods have been attempted prior to the request for lethal take.” In fact, the Corps has not met this threshold. The FEIS lists numerous studies that have been conducted regarding cormorants on East Sand Island in order to create the impression that non-lethal dispersion efforts have been attempted and failed. However, none of these studies was actually designed to test whether dispersal is a viable strategy. The Corps’ “principal investigator for research, monitoring and evaluation related to avian predation on juvenile salmonids in the Columbia River Estuary,” Dan Roby wrote in his comments:

The DEIS and subsequent outreach efforts by the Corps imply that nonlethal management technique—habitat restriction to induce breeding dispersal away from East Sand Island—has already been attempted and has not been successful. This misrepresents the scope of the experiments that our research team conducted during 2011–2013 to test such a

technique It is incorrect and misleading to imply that non-lethal management techniques have been attempted and have failed in advance of selecting a primarily lethal management approach as the preferred alternative

FEIS at Appendix J, Letter from Daniel Roby. Thus, because the Corps could not have determined that non-lethal deterrents were unsuccessful (because no such deterrents have been tried), FWS may not issue a depredation permit to the Corps.

128. Fourth, the FWS ROD fails to adequately address concerns about partial or complete colony failure caused by human disturbance associated with the adopted alternative. FWS relies upon monitoring as a strategy to prevent colony failure. However, the FEIS acknowledges that colony abandonment is in fact a real possibility. The implementation plan includes 6 to 8 shooting events at the colony with associated colony entry by government agents to retrieve carcasses and 4 to 6 egg oiling events per season with government agents walking through the colony oiling eggs with backpack sprayers. This means that in addition to 6 to 8 shooting events per season, the colony could be entered for extended periods as many as 14 times during the nesting season to facilitate oiling and carcass removal. This management plan represents a remarkable number of highly disturbing intrusions into a colony that is otherwise only approached via an extensive tunnel system and bird blinds that hide human activity from nesting birds because of concern over disturbance causing either take or abandonment.

129. Wildlife Services, which would implement Alternative C-1 under contract with the Corps, outlined the potential for disturbance in a letter to the Corps: “Multiple incursions could cause increased disturbances and potential displacement from the colony. . . . [Wildlife Service’s] experience in the Great Lakes region has found that some nesting colonies will hold for a very long times with a high tolerance during a disturbance. . . . Whereas, some (fewer) colonies have an extremely low tolerance.” FWS relies upon monitoring of the colony to address

this concern providing that control activities will be suspended if colony numbers fall below 70 percent of expected population levels of what is anticipated following a control event.

130. However, this provision does not account for the fact that mortality could easily far exceed the number of birds permitted to be taken under the depredation permit due to a variety of factors associated with flushing as a result of human disturbance, including trampling eggs or young during flushing events, predation on eggs or young during flushing events, mortality due to heating or cooling of eggs or young during flushing events, and abandonment of eggs or young caused by flushing events. FWS is permitting multiple high-risk incursions into a nesting colony that otherwise is heavily protected from human disturbance. Monitoring post-disturbance does not prevent or reduce the risk that these incursions will cause significant or catastrophic colony failure in excess of permits.

131. Fifth, the FWS ROD allows the take of 105 Brandt's and 10 pelagic cormorants due to misidentification. However, the MBTA does not provide FWS with the authority to issue incidental take permits of non-target species.

132. Sixth, although FWS says that it intended to issue a permit for the actions described in the Corps application, in fact the number of nests allowed to be taken in the permit (5,870) varies slightly from the number requested by the Corps (5,879). While this may simply be an error, it is surprising given that the amount of allowed take is the primary focus of the permit.

133. Finally, FWS' MBTA permit fails to address the fact that implementation of Alternative C-1 would begin very late in the nesting season—something the FEIS recognizes as increasing the risk of the entire endeavor. The FEIS identifies nesting initiating as beginning on March 27th, a full two weeks earlier than the date on which FWS issued its record of decision.

in MBTA permits. FWS and the Corps ignore repeated references in the cormorant EIS to the importance of initiating the cormorant control activities and related actions early in the nesting season to minimize disturbance. There remains no indication from either FWS or the Corps that any key pre-season preparations, including adaption of colony infrastructure to minimize disturbance, training of personnel, and monitoring of cormorant populations throughout the Pacific Flyway had been initiated. It is certain that the Corps has already missed by several weeks its promised plan to initiate control activities prior to the onset of nesting. Therefore, the Corps is already in significant violation of the terms set forth in its own FEIS and plan and FWS arbitrarily issued permits for 2015 control activities when the agency was already aware the Corps could not meet the terms set forth in the permits, which incorporated the provisions in FEIS and ROD by reference.

134.

The Alleged Benefits of the Cormorant Management Plan

135. The Corps admitted that reducing cormorant mortality might not lead to the anticipated survival benefits for juvenile salmonids because reductions in cormorant colony size might not directly correlate with increases in salmon survival rates, and because removing thousands of cormorants from the ecosystem could have unforeseen consequences in the food web.

136. Although the Corps briefly acknowledged the factors affecting the large inter-annual variation in cormorant predation on juvenile smolts, the Corps failed to explain how these factors might affect future predation rates. A study cited by the Corps explained that East Sand Island colony size was not a good predictor of predation rates on salmonids. Because cormorant colony size does not correlate with juvenile salmonid consumption, the benefits to salmon by

reducing the colony size are difficult to predict. The Corps did not reconcile the study's findings with its presumption in the EIS that reducing the colony size would lead to reduced juvenile salmonid consumption.

137. The Corps disregarded compensatory mortality in its assessment of the benefits of the management plan even though studies cited in the EIS show that cormorant predation is at least partly compensatory. Because of this assumption, the Corps overestimated the increase in the number of listed salmonids that will survive as a result of the Corps' management plan. A NMFS study, cited by the Corps, explained that "[g]roups [of steelhead and yearling Chinook smolts] that experienced lower avian predation rates in the estuary . . . returned as adults at higher rates only some of the time" because "differences in rates of smolt mortality . . . were compensated for by other mortality factors" The Corps concluded that these studies "cast[] . . . doubt on assumptions that avian predation in the estuary is either fully additive or fully compensatory." Despite this conclusion, the Corps disregarded compensatory mortality because it assumed mortality was fully additive, thereby overestimating the benefits to salmonid survival.

138. The Corps provided two reasons for its assumption of no compensatory mortality. First, the Corps did not apply compensatory mortality "because the degree to which avian predation of juvenile salmonids in the Columbia River Basin is compensatory versus additive is currently unknown." Thus, because the Corps cannot ascertain the exact ratio of compensatory versus additive mortality, the Corps chose to disregard compensatory mortality even though it acknowledged that compensatory mortality is a factor.

139. Second, the Corps explained "the purpose and need of this EIS is to reduce depredation damage caused by [cormorant] predation of juvenile salmonids, which is a well-studied and documented source of mortality." It may well be true that cormorants are a source of

mortality, however this statement does not diminish the likelihood that some portion of the reduction in cormorant predation may provide no benefit to salmonid survival.

140. The Corps newly explained in the FEIS that because the agency disregarded compensatory mortality, the benefits described in the cormorant EIS are “potential maximum benefits that *could* occur.” (emphasis added). However, the issue of compensatory mortality is central to determining the benefits of the proposed plan. The Corps recognized: “These potential benefits would ultimately depend on the degree of compensation actually occurring and other factors that could result in the management goals for reduced predation not being achieved” One study noted that “[t]he efficacy of predator control efforts for restoring prey populations . . . depends on whether reductions in mortality due to predation are compensated for by other mortality factors.” The study explained: “[I]f most of the juvenile salmonids that are consumed by avian predators would have died from other causes, then reductions in avian predation will not result in commensurate increases in the number of returning adult salmonids.” But the Corps, after explaining that compensatory mortality could be a factor, chose to not apply compensatory mortality in its assessment of the benefits of the management plan.

141. The Corps failed to adequately address the issue of hatchery versus wild susceptibility to cormorant predation. NMFS acknowledged that this issue could affect the application of NMFS’s results of its gap analysis. This issue is especially relevant to determining the benefits of the cormorant management plan because cormorants are being managed for the purpose of increasing survival of *listed* salmonids.

142. Further, in relying on NMFS’s determination that removing cormorants from East Sand Island would lead to increased salmonid survival, the Corps did not adequately address studies that show that removal of cormorants could increase predation on and/or competition

with salmonids by other fish species. Cormorants eat northern pikeminnows, which eat salmonids. One study cited in the 2010 BiOp suggests that “smolt survival could be maximized by deterring birds from the [Columbia River] when smolts were present, allowing bird presence after the diet switch to act as a tool for salmonid-predator control” The Corps did not address in the EIS whether removing cormorants would increase predation on juvenile salmonids by northern pikeminnows, which undermines its conclusion that this management plan will increase listed salmonid survival.

143. Another study cited in the 2010 Supplemental BiOp concluded that cormorants’ winter diet consisted mainly of non-native juvenile shad. NMFS admitted that “[t]he extent to which cormorants prey on shad when smolts have emigrated from the system has not been addressed.” And, the Corps did not address in the EIS whether removing cormorants would increase non-native shad populations and how that increase might affect listed salmonid populations. In fact, it did not mention shad at all.

144. The FEIS Response to Comments explained that cormorants on East Sand Island “do not consume significant amounts of non-native predators” so therefore, the Corps need not address likely effects on pikeminnow populations or how a potential increase in pikeminnow populations might affect salmonids. Research cited by the Corps shows that minnows and carp make up on average about five percent of cormorant prey biomass during the cormorant breeding season. Studies show that pikeminnows make up a larger percentage after breeding season. The same research concluded that herring and sardines, which includes shad, make up between five and ten percent of cormorant prey biomass during the cormorant breeding period, and according to NMFS, a much higher percentage during winter. The Corps did not explain why five or more percent during the breeding season and a potentially higher percentage outside of breeding

season is not a “significant amount” or how reducing cormorant predation might affect pikeminnow predation on and shad competition with salmonids.

145. The Corps failed to adequately address limiting factors for salmonid survival that are independent of cormorant predation on limiting salmonid survival. One study concluded that further research into limiting factors would help the Corps “to correctly interpret why a management action to reduce colony size may have caused little in the way of a reduction in smolt mortality in any given year.” These limiting factors, including plume size in the estuary and flow allowed by the dams, limit the number of salmonids that will survive regardless of the rate of cormorant predation on salmonids. However, despite these conclusions and despite the fact that many of these limiting factors have not been adequately studied nor adequately addressed, the Corps chose to lethally manage the cormorant colony, blindly hoping that the management plan will give the appearance that the Corps is taking steps to recover salmon.

146. Despite acknowledging that “[t]here are many causes of mortality to juvenile salmonids” including hydropower dams (which reduces flow thus reducing sediment movement downstream and decreases the size of the plume in the estuary), degraded habitat conditions such as high water temperatures, hatchery management, and loss of habitat, the Corps excluded those options from consideration when it confined its alternatives analysis in its cormorant EIS to those related to reducing cormorant predation on juvenile salmonids.

147. The *Estuary Module* explained that while “tempting to pick and choose among the management actions, looking for the path of least resistance to achieve the desired survival improvements,” action agencies must implement “management actions in the estuary not directly related to predation.” It went on to explain that “the most important take-home message of the estuary plan module is that recovery of listed ESUs in the Columbia River may not be possible

without properly functioning estuary and plume ecosystems.” This conclusion implies that without making changes to the operation of the FCRPS, other management actions, including reducing avian predation, are unlikely to result in salmonid recovery.

FIRST CLAIM FOR RELIEF

Corps’ Violation of NEPA and APA

148. Plaintiffs re-allege and incorporate by reference the preceding paragraphs into each of the counts set forth below.

149. The Corps violated the National Environmental Policy Act (“NEPA”), 42 U.S.C. § 4321 *et seq.*, and NEPA’s implementing regulations. Specifically, this claim challenges the Corps’ compliance with NEPA in relation to the agency’s March 19, 2015 Record of Decision to implement the preferred alternative in the Double-crested Cormorant Management Plan to Reduce Predation of Juvenile Salmonids in the Columbia River Estuary Environmental Impact Statement. In its response to comments on the draft cormorant EIS, the Corps asserted that the agency was justified in narrowly confining its 2015 EIS to consider only alternatives seeking to increase juvenile salmon survival by killing or otherwise managing cormorants because the agency was implementing the RPA contained in NMFS’s 2014 BiOp for FCRPS operations. The Corps declared that it would operate the FCRPS and take other actions consistent with the 2014 BiOp’s RPA in its Supplemental Record of Consultation and Statement of Decision (“ROCASOD”), dated February 28, 2014. Therefore, this cause of action also challenges the Corps’ compliance with NEPA in connection with its ROCASOD.

150. NEPA mandates that an agency “shall to the fullest extent possible” use the environmental impact assessment process “to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of

the environment.” 40 C.F.R. § 1500.2(e). Reasonable alternatives include those that substantially meet the agency’s purpose and need.

151. The Corps has violated and is violating NEPA and its implementing regulations because it has failed to conduct any comprehensive, up-to-date, thorough environmental analysis that examines the environmental impacts of its operation of the FCRPS and related actions, and which includes an analysis of an adequate range of alternative means to improve survival of juvenile salmon and steelhead.

152. An agency may tier its environmental analysis under NEPA to an earlier EIS, but only so long as the EIS to which an analysis is tiered is itself adequate. *Cf.* 40 C.F.R. § 1502.20. The Corps tiered the cormorant management plan to an assortment of outdated or tangentially related NEPA documents, the most prominent of which includes the almost twenty-year-old SOR EIS for FCRPS operations. Since preparation of the SOR EIS two decades ago, much has changed in the Columbia Basin with regard to both listed salmon and steelhead and the factors affecting their recovery, including (but not limited to) listing of additional salmon and steelhead ESUs, designation of additional critical habitat, new scientific understanding of threats posed by climate change, changes in tributary and mainstem habitat conditions, new scientific understanding of factors affecting salmon survival in the Columbia River estuary, development and approval of salmon and steelhead recovery plans under the ESA, development of a CCMP for the Columbia estuary, and increased scientific understanding of factors affecting salmonid survival. However, the Corps in its cormorant EIS did not even try to explain how the 1997 SOR EIS remains adequate to comply with the agency’s obligation under NEPA to consider alternative hydrosystem operations, or to explain why the Corps has refused to consider—whether in the cormorant EIS or elsewhere—alternative means of operating the hydrosystem to

improve juvenile salmon survival to the extent that the Corps would not need to kill thousands of cormorants to avoid jeopardizing the continued existence of listed salmon and steelhead ESUs.

153. All but the no action alternative in the Corps' cormorant EIS involve taking or managing cormorants. The Corps refused to consider any alternative that would have obviated the need to manage cormorants by addressing other, often more severe, limitations on juvenile salmon survival. Further, the narrow range of alternatives considered in the Corps' cormorant EIS could actually exacerbate other sources of salmonid mortality, such as pikeminnow predation on juvenile salmonids and competition from non-native shad.

154. Plaintiffs' comments on the cormorant EIS suggested reasonable alternatives that would have increased salmonid survival without a need to kill thousands of native birds, but the Corps refused to consider these reasonable and feasible alternatives in the cormorant EIS.

155. The Corps should have analyzed a wider range of alternatives in its cormorant EIS that better addressed the underlying causes of salmonid decline, including improving the operation and configuration of the dams that account for the overwhelming percentage of juvenile salmonid mortality. The Corps had an obligation to complete such an analysis under NEPA, which it could have satisfied by: (a) including in the Corps' cormorant EIS an analysis of alternatives for improving juvenile salmon survival that did not depend on, or minimized the need to rely on, reducing cormorant predation; or (b) completing an adequate and up-to-date EIS analyzing overall hydrosystem operations and tiering the Corps' cormorant EIS to the Corps' new hydrosystem EIS (assuming the Corps had selected a FCRPS operation alternative that called for reductions in cormorant predation).

156. The Corps' failure to consider a reasonable range of alternatives, either in the cormorant EIS or in an EIS performed in conjunction with the agency's ROCASOD, examining

overall hydrosystem operations for improving survival of listed juvenile salmon and steelhead is arbitrary, capricious, an abuse of discretion, and not in accordance with NEPA, in violation of 5 U.S.C. §706(2)(A).

SECOND CLAIM FOR RELIEF

The Corps' cormorant EIS's purpose and need are too narrowly defined and violate NEPA

157. Plaintiffs re-allege and incorporate by reference the preceding paragraphs into each of the counts set forth below.

158. CEQ's implementing regulations for NEPA require an agency's NEPA analysis to include a purpose and need section which "briefly specif[ies] the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action." 40 C.F.R. § 1502.13.

159. The Corps' 2015 cormorant EIS uses an overly narrow purpose and need statement that improperly focuses only on "reduc[ing cormorant] predation of juvenile salmonids in the Columbia River Estuary to levels identified in the environmental baseline (base period) of the 2008/2010 FCRPS Biological Opinion" This narrow purpose and need statement resulted in an EIS that examined alternatives to improve salmon survival that focused exclusively on controlling cormorants.

160. As noted above, the Corps could obviate any need—actual or perceived—to kill or manage cormorants by adopting other means of improving juvenile salmon and steelhead, including through modifications to FCRPS operations.

161. In the absence of another up-to-date document that satisfies the Corps' responsibility under NEPA to assess alternative means of operating the FCRPS to improve salmon and steelhead survival, the Corps' efforts for forestall consideration under NEPA of

alternative means of improving salmon survival in its 2015 cormorant EIS by crafting an improperly narrow purpose and need statement is arbitrary, capricious, an abuse of discretion, and not in accordance with NEPA, in violation of 5 U.S.C. § 706(2)(A).

THIRD CLAIM FOR RELIEF

Corps' failure to take a "hard look" at whether the project will achieve purpose and need.

162. Plaintiffs re-allege and incorporate by reference the preceding paragraphs into each of the counts set forth below.

163. NEPA requires agencies to take a "hard look at environmental consequences" of the proposed action. The EIS must provide a good faith analysis and sufficient information to allow a firm basis for weighing the risks and benefits of a proposed action. 40 C.F.R. § 1502.1.

164. The Corps' analysis in the EIS did not consider important limiting factors for juvenile salmon survival, including reduced plume size and low flow caused by dam operations. Additionally, the EIS virtually ignored compensatory mortality and did not consider the likelihood of pikeminnow populations increasing as a result of removing thousands of cormorants from the food chain, and the consequent effect on salmon survival due to increased predator fish populations. Further, the Corps failed to adequately consider studies that showed that cormorants eat more hatchery-origin salmonids than they do wild-origin. Thus, the Corps failed to consider information that is relevant to weighing the risks and benefits of the proposed action.

165. The Corps' failure to adequately identify and consider information relevant to assessing the benefits and risks of the proposed actions is arbitrary, capricious, an abuse of discretion, and not in accordance with NEPA, in violation of 5 U.S.C. § 706(2)(A).

FOURTH CLAIM FOR RELIEF

Corps' failure to adequately consider direct and cumulative impacts of proposed action

166. Plaintiffs re-allege and incorporate by reference the preceding paragraphs into each of the counts set forth below.

167. Pursuant to NEPA, the Corps must fully discuss and analyze the Project's direct, indirect, and cumulative impacts, when added to other past, present and reasonably foreseeable future actions within and nearby the Project area. 40 C.F.R. § 1508.7.

168. The Corps failed to adequately or accurately address the current status of Cormorant populations in the Western United States. While the Corps asserts that populations are stable or increasing, the data provided on a region-by-region basis indicates that in most regions, populations are actually decreasing or data to make a conclusion is not currently available.

169. The Corps failed to adequately or accurately address the current level of risk to DCCO from a variety of anthropogenic and natural threats including climate change, pesticides, disturbance, reduction in the availability of forage fish, hazing activities conducted by the states of Oregon and Washington, state level policies limiting growth of cormorant populations throughout much of Oregon and Washington, and illegal take.

170. The Corps failed to examine how reducing the cormorant population below sustainable levels is likely to affect the western population of cormorants. The Corps failed to adequately explain how the cormorant population would rebound, or whether this population would be allowed to rebound after being pushed below sustainable levels.

171. The Corps' cormorant EIS also failed to adequately assess other potential impacts of its management plan, including the risk of catastrophic failure of the East Sand Island

cormorant colony due to excessive human intrusion. The EIS also does not adequately address the reasonably foreseeable possibility that the agency's cormorant control program will continue beyond the 4-year timeline provided for in the management plan. Given that the Corps' plan calls for maintaining cormorant predation at a "base" level, combined with ample evidence that cormorants from other colonies have immigrated to East Sand Island, and are likely to continue to immigrate to East Sand Island, it is reasonably foreseeable that the Corps may have to continue killing cormorants for many years into the future to maintain the birds' East Sand Island population at the Corps' target level. Additionally, the Corps failed to adequately analyze the effects of this foreseeable long-term killing program on other western cormorant populations throughout the western United States given extensive immigration from these populations to East Sand Island, coupled with deteriorating habitat conditions for cormorants in significant portions of their range in the western United States.

172. The Corps' failure to provide a quantified analysis of the direct, indirect, and cumulative impacts from the Project and all the "past, present, and reasonably foreseeable future activities" in the management area violate NEPA and its implementing regulations, 40 C.F.R. § 1508.7, and thus is arbitrary, capricious, an abuse of discretion, and not in accordance with NEPA, in violation of 5 U.S.C. § 706(2)(A).

FIFTH CLAIM FOR RELIEF

Corps' violations of the APA

173. Plaintiffs re-allege and incorporate by reference the preceding paragraphs into each of the counts set forth below.

174. The Administrative Procedure Act, 5 U.S.C. §§ 551 *et seq.*, APA requires courts to "hold unlawful and set aside agency action, findings, and conclusions found to be . . .

arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706.

175. The Corps failed to explain a rational connection between its decision to carry out the preferred alternative in the cormorant EIS and an increase in survival of listed juvenile salmon and steelhead to the extent necessary to fill the “survival gaps” identified in NMFS’ 2014 FCRPS BiOp. The best available science indicates that many—and perhaps virtually all—of the imperiled juvenile salmon and steelhead eaten by cormorants would not have survived to return as spawning adults. Additionally, in deciding to proceed with its preferred alternative, the Corps did not consider the likelihood of pikeminnow and other fish predators’ populations increasing as a result of removing cormorants from the food chain, and the consequent effects on juvenile salmonid survival. Further, the Corps failed to account for information showing that cormorants eat more hatchery-origin salmonids than they do wild-origin fish.

176. By failing to draw a rational connection between its plan to kill thousands of cormorants and survival increases of listed juvenile salmon and steelhead, leading to increased return of spawning adults to the extent deemed necessary by NMFS in its 2014 FCRPS BiOp, the Corps’ decision to implement the preferred alternative in its cormorant EIS is arbitrary, capricious, an abuse of discretion, in violation of 5 U.S.C. § 706(2)(A).

SIXTH CLAIM FOR RELIEF

Corps’ lack of authority to manage cormorants on East Sand Island

177. Plaintiffs re-allege and incorporate by reference the preceding paragraphs into each of the counts set forth below.

178. The Corps does not have the authority under WRDA 1996 Subsection 511(c) to manage cormorants on East Sand Island.

179. WRDA authorizes the Corps to manage cormorants only if its management is consistent with a management plan developed by the FWS. FWS has developed no such plan. Accordingly, because there is no FWS cormorant management plan with which the Corps' management proposal could be consistent, the Corps may not manage cormorants under the authority of the WRDA. The Corps has no other statutory authority to manage cormorants on East Sand Island.

180. Without a plan prepared by FWS, the Corps' decision to manage cormorants according to the cormorant EIS's preferred alternative is arbitrary, capricious, an abuse of discretion, and not in accordance with law, in violation of 5 U.S.C. § 706(2)(A).

SEVENTH CLAIM FOR RELIEF

FWS's violations of the MBTA

181. Plaintiffs re-allege and incorporate by reference the preceding paragraphs into each of the counts set forth below.

182. It is unlawful for any person, including the federal government, to kill any migratory bird. Despite the general prohibition, the Secretary of the Interior may permit the killing of migratory birds. An entity must acquire a permit before "tak[ing], possess[ing], or transport[ing] migratory birds for depredation control purposes." 50 C.F.R. § 21.41(a). However, a permit may not issue if "[t]he authorization requested potentially threatens a wildlife or plant population" *Id.* at § 13.21(b)(4). Neither the MBTA nor its implementing regulations define the term "threaten." *See id.* at § 10.12.

183. According to the cormorant EIS, the Corps' management plan for East Sand Island would reduce the western population of cormorants by up to 38.5%, to a population of approximately 38,500 individuals. This number is more than 3,000 fewer birds than the Corps

and FWS define as a “sustainable” population, i.e., “a population that is able to maintain a long-term trend with numbers above a level that would not result in a major decline or cause a species to be threatened or endangered.”

184. Even in the absence of large-scale culling, the western population of cormorants is at risk due to a myriad of factors, including drought, climate change, habitat loss, and disease. Cormorants immigrate from other western colonies to East Sand Island, so birds from these colonies that otherwise may survive may be killed under the Corps’ management plan.

185. The Corps’ plan for killing cormorants and destroying eggs on and near East Sand Island also puts at risk the entire cormorant colony on the island. The Corps’ planned actions involve repeated human entries into the East Sand Island colony during nesting season. Moreover, killing individual birds will result in the destruction of eggs and starvation of young in active nests when a parent bird is killed, and the resulting decomposing eggs and young will attract additional predators to the island. These actions present a significant risk that cormorants may abandon East Sand Island altogether, resulting in nesting failure of the entire colony; human actions could also result in substantially lower reproductive success of the East Sand Island colony even if cormorants do not entirely abandon the island. Loss, or substantial reduction, of reproductive success of this population also would threaten the entire western population.

186. For the reasons set forth above, implementation of the Corps’ management plan for cormorants on East Sand Island would threaten entire western cormorant population. Accordingly, issuance of a MBTA permit authorizing this level of lethal take of cormorants violates regulations implementing the MBTA and is arbitrary, capricious, an abuse of discretion, and not in accordance with law, in violation of 5 U.S.C. § 706(2)(A).

EIGHTH CLAIM FOR RELIEF

FWS's violations of the MBTA

187. Plaintiffs re-allege and incorporate by reference the preceding paragraphs into each of the counts set forth below.

188. FWS regulations allow the agency to permit take of migratory birds for “depredation control purposes.” 50 C.F.R. §21.41(a). However, nothing in these regulations authorizes FWS to include within a depredation permit authorization to take non-target birds, i.e. birds that are likely to be incidentally killed in the course of control of the birds committing the depredations. In the past, FWS has specifically noted that it has no authority to permit incidental take of non-target birds through a depredation permit.

189. FWS's depredation permit for double-crested cormorants on East Sand Island explicitly also permits take of pelagic cormorants and Brandt's cormorants “due to misidentification.” This authorization for incidental take of non-target cormorants due to misidentification exceeds FWS's authority under the agency's regulations implementing the MBTA and is arbitrary, capricious, an abuse of discretion, and not in accordance with law, in violation of 5 U.S.C. § 706(2)(A).

NINTH CLAIM FOR RELIEF

FWS's violations of the APA

190. Plaintiffs re-allege and incorporate by reference the preceding paragraphs into each of the counts set forth below.

191. The Administrative Procedure Act, 5 U.S.C. §§ 551 *et seq.*, requires courts to “hold unlawful and set aside agency action, findings, and conclusions found to be . . . arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706.

192. Regulations implementing the MBTA provide that FWS should reject a request for a depredation permit when the applicant has “failed to demonstrate a valid justification for the permit and a showing of responsibility.” 50 C.F.R. § 13.21(b)(3). In its permit decision, FWS merely recounts assertions by the Corps that killing thousands of cormorants will result in increases in survival of listed juvenile salmon and steelhead in the Columbia River estuary that in turn result in increased returns of spawning adults. However, FWS made no effort in its ROD to assess whether the Corps’ assertion is in fact true. At the same time, the cormorant EIS and other available information raises substantial doubts as to the link between cormorant predation and increased adult returns of listed salmon and steelhead. The EIS and administrative record includes information demonstrating a lack of correlation between cormorant colony size and cormorant predation on juvenile salmon and steelhead, information suggesting high levels of compensatory salmonid mortality (meaning that listed juvenile salmon and steelhead eaten by cormorants would simply be eaten by other predators or otherwise not survive to adulthood even if cormorant predation is reduced), information suggesting that cormorants eat predominantly salmon and steelhead that originate in hatcheries, and information suggesting that reducing cormorant numbers could lead to increases in pikeminnows and other fish that prey on and compete with juvenile salmonids.

193. FWS’s administrative record for its depredation permit to kill cormorants in the Columbia River estuary does not support the existence of a rational connection between the agency’s decision to grant the permit to kill thousands of cormorants and an increase in survival of listed juvenile salmon and steelhead to the extent necessary to fill the “survival gaps” identified in NMFS’s 2014 FCRPS BiOp. On the contrary, the agency’s administrative record likely indicates the lack of such a connection. FWS also made no effort in its record of decision

for the depredation permit to explain how killing cormorants would result in the salmon and steelhead survival benefits identified as the purpose of these killings in the Corps' depredation permit application.

194. By failing to draw a rational connection between permitting the killing of thousands of cormorants and survival increases of listed juvenile salmon and steelhead, leading to increased return of spawning adults to the extent deemed necessary by NMFS in its 2014 FCRPS BiOp, FWS decision to grant a depredation permit to the Corps to implement the preferred alternative in the cormorant EIS is arbitrary, capricious, an abuse of discretion, in violation of 5 U.S.C. § 706(2)(A).

TENTH CLAIM FOR RELIEF

Corps' violations of the MBTA

195. Plaintiffs re-allege and incorporate by reference the preceding paragraphs into each of the counts set forth below.

196. The Corps' cormorant management plan calls for killing 3,489 individual cormorants and 5,879 nests lost due to egg oiling. Additionally, the Corps' cormorant EIS recognizes that up to 3,489 additional nest will be lost—meaning that eggs in the nests would not hatch and any juvenile birds in these nests would die—as a result of the death of parent birds' deaths due to shooting; even if only one bird of a nested pair is killed, the remaining bird of a nested pair cannot by itself protect eggs or provide young with sufficient food.

197. The MBTA prohibits any person, including the federal government, from killing any migratory bird without a permit. FWS issued the Corps a permit authorizing killing 3,489 individual cormorants in the Columbia River estuary and destroying 5,879 nests on East Sand Island; however, the agency did not authorize in its permit decision the loss of eggs or death of

young in nests associated with the 3,489 individual birds permitted to be killed. The Corps' EIS makes it clear that eggs in active nests will be rendered in-viable and young in nests will die as a result of parent birds being killed; according to the cormorant EIS, shooting 3,489 individual cormorants will result in loss of eggs and death of young in up to 3,489 nests associated with the individual birds killed. By authorizing action that will result in the unpermitted take of eggs and young in potentially thousands of nests, the Corps' decision to implement its cormorant management plan violates the MBTA and is arbitrary, capricious, an abuse of discretion, and not in accordance with law, in violation of 5 U.S.C. § 706(2)(A).

ELEVENTH CLAIM FOR RELIEF

Wildlife Services' violation of the APA

198. Plaintiffs re-allege and incorporate by reference the preceding paragraphs into each of the counts set forth below.

199. Wildlife Services adopted the Corps' cormorant EIS on April 17, 2015. Due to the violations of law set forth above, any actions by Wildlife Services to kill cormorants in or near the Columbia River estuary would be arbitrary, capricious, an abuse of discretion, and not in accordance with law, in violation of 5 U.S.C. § 706(2)(A). Similarly, and actions by Wildlife Services to destroy cormorant eggs or nests on East Sand Island would be arbitrary, capricious, an abuse of discretion, and not in accordance with law, in violation of 5 U.S.C. § 706(2)(A).

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs respectfully pray for an order and judgment:

1. Vacating and setting aside the Corps' cormorant EIS and the ROD, as well as the Corps' ROCASOD calling for implementation of FCRPS operations consistent with NMFS's 2014 FCRPS BiOp, as illegal agency actions under the APA;
2. Declaring that the Corps violated NEPA;
3. Declaring that the Corps violated the APA;
4. Declaring that the Corps lacks authority to manage cormorants on East Sand Island because FWS has not adopted a management plan for this population;
5. Declaring that the FWS violated the MBTA by issuing a take permit that allows incidental take and that will cause a population to potentially become threatened;
6. Declaring that FWS violated the MBTA by issuing permits to kill birds that are not committing the depredations the Corps seeks to control;
7. Declaring that FWS violated the APA;
8. Enjoining the Corps from implementing the Double-crested Cormorant Management Plan to Reduce Predation of Juvenile Salmonids in the Columbia River Estuary Environmental Impact Statement;
9. Enjoining the FWS from issuing permits to kill double-crested cormorants, pelagic cormorants, and Brandt's cormorants on East Sand Island;
10. Enjoining Wildlife Services from killing cormorants in and around the Columbia River estuary, and enjoining the agency from destroying cormorant nests or eggs on East Sand Island;

11. Awarding Plaintiff its reasonable attorneys fees and costs pursuant to the Equal Access to Justice Act, 28 U.S.C. § 2412; and

Awarding such further relief as the Court deems just and equitable.

DATED: April 20, 2015

Respectfully Submitted,

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